

#4

RAW SEQUENCE LISTING DATE: 08/01/2000
 PATENT APPLICATION: US/09/343,406 TIME: 11:11:15

Input Set : A:\343406.txt
 Output Set: N:\CRF3\08012000\I343406.raw

SEQUENCE LISTING

4 (1) GENERAL INFORMATION:
 6 (i) APPLICANT: ENDL, Josef
 7 STAHL, Peter
 8 ALBERT, Winfried
 9 JUNG, Guenther-Gerhard
 10 SCHENDEL, Dolores J.
 11 MEINL, Edgar
 12 DORNMAIR, Klaus
 14 (ii) TITLE OF INVENTION: ANTIGEN-SPECIFIC, ACTIVATED T
 15 LYMPHOCYTES, DETECTION AND USE
 17 (iii) NUMBER OF SEQUENCES: 39
 19 (iv) CORRESPONDENCE ADDRESS:
 20 (A) ADDRESSEE: Nikaido, Marmelstein, Murray & Oram LLP
 21 (B) STREET: 655 Fifteenth Street N.W. Suite 330
 22 (C) CITY: Washington
 23 (D) STATE: D.C.
 24 (E) COUNTRY: U.S.A.
 25 (F) ZIP: 20005-5701
 27 (v) COMPUTER READABLE FORM:
 28 (A) MEDIUM TYPE: Floppy disk
 29 (B) COMPUTER: IBM PC compatible
 30 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 31 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
 33 (vi) CURRENT APPLICATION DATA:
 C--> 34 (A) APPLICATION NUMBER: US/09/343,406
 C--> 35 (B) FILING DATE: 30-Jun-1999
 36 (C) CLASSIFICATION:
 52 (vii) PRIOR APPLICATION DATA:
 39 (A) APPLICATION NUMBER: 08/967,242
 40 (B) FILING DATE: 05-NOV-1997
 42 (A) APPLICATION NUMBER: US 08/374,468
 43 (B) FILING DATE: 18-JAN-1995
 45 (A) APPLICATION NUMBER: DE P 44 01 629.8
 46 (B) FILING DATE: 20-JAN-1994
 49 (A) APPLICATION NUMBER: DE P 44 03 522.5
 50 (B) FILING DATE: 04-FEB-1994
 53 (A) APPLICATION NUMBER: DE P 44 18 091.8
 54 (B) FILING DATE: 24-MAY-1994
 56 (viii) ATTORNEY/AGENT INFORMATION:
 57 (A) NAME: Murray, Robert B.
 58 (B) REGISTRATION NUMBER: 22,980
 59 (C) REFERENCE/DOCKET NUMBER: P564-U5002
 61 (ix) TELECOMMUNICATION INFORMATION:
 62 (A) TELEPHONE: (202)638-5000
 63 (B) TELEFAX: (202)638-4810
 66 (2) INFORMATION FOR SEQ ID NO: 1:

ENTERED

RAW SEQUENCE LISTING DATE: 08/01/2000
 PATENT APPLICATION: US/09/343,406 TIME: 11:11:15

Input Set : A:\343406.txt
 Output Set: N:\CRF3\08012000\I343406.raw

```

68      (i) SEQUENCE CHARACTERISTICS:
69          (A) LENGTH: 8 amino acids
70          (B) TYPE: amino acid
71          (C) STRANDEDNESS:
72          (D) TOPOLOGY: linear
74      (ii) MOLECULE TYPE: peptide
75      (ix) FEATURE:
76          (A) NAME/KEY: Peptide
77          (B) LOCATION: 1
78          (D) OTHER INFORMATION: /note= "Xaa in position 1 is an
81 optional sequence selected from 1 to 10 amino acids."
82      (ix) FEATURE:
83          (A) NAME/KEY: Peptide
84          (B) LOCATION: 6
85          (D) OTHER INFORMATION: /note= "Xaa in position 6 is Thr or Glu."
86      (ix) FEATURE:
87          (A) NAME/KEY: Peptide
88          (B) LOCATION: 8
89          (D) OTHER INFORMATION: /note= "Xaa in position 8 is
92 an optional sequence selected from 1 to 8 amino acids."
93      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
W--> 97      Xaa Pro Glu Val Lys Xaa Lys Xaa
98          1          5
100 (2) INFORMATION FOR SEQ ID NO: 2:
101      (i) SEQUENCE CHARACTERISTICS:
102          (A) LENGTH: 25 amino acids
103          (B) TYPE: amino acid
104          (C) STRANDEDNESS:
105          (D) TOPOLOGY: linear
106      (ii) MOLECULE TYPE: peptide
107      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
108      Gly Met Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser
109      1          5          10          15
110      His Phe Ser Leu Lys Lys Gly Ala Ala
111      20          25
112 (2) INFORMATION FOR SEQ ID NO: 3:
113      (i) SEQUENCE CHARACTERISTICS:
114          (A) LENGTH: 20 amino acids
115          (B) TYPE: amino acid
116          (C) STRANDEDNESS:
117          (D) TOPOLOGY: linear
118      (ii) MOLECULE TYPE: peptide
119      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
120      Glu Arg Gly Lys Met Ile Pro Ser Asp Leu Glu Arg Arg Ile Leu Glu
121      1          5          10          15
122      Ala Lys Gln Lys
123      20
124 (2) INFORMATION FOR SEQ ID NO: 4:
125      (i) SEQUENCE CHARACTERISTICS:

```

RAW SEQUENCE LISTING DATE: 08/01/2000
 PATENT APPLICATION: US/09/343,406 TIME: 11:11:15

Input Set : A:\343406.txt
 Output Set: N:\CRF3\08012000\I343406.raw

```

142      (A) LENGTH: 14 amino acids
143      (B) TYPE: amino acid
144      (C) STRANDEDNESS:
145      (D) TOPOLOGY: linear
147      (ii) MOLECULE TYPE: peptide
150      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
152      Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe
153      1          5          10
155 (2) INFORMATION FOR SEQ ID NO: 5:
157      (i) SEQUENCE CHARACTERISTICS:
158          (A) LENGTH: 20 amino acids
159          (B) TYPE: amino acid
160          (C) STRANDEDNESS:
161          (D) TOPOLOGY: linear
163      (ii) MOLECULE TYPE: peptide
167      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
169      Gly Met Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser
170      1          5          10          15
172      His Phe Ser Leu
173      20
175 (2) INFORMATION FOR SEQ ID NO: 6:
177      (i) SEQUENCE CHARACTERISTICS:
178          (A) LENGTH: 20 amino acids
179          (B) TYPE: amino acid
180          (C) STRANDEDNESS:
181          (D) TOPOLOGY: linear
183      (ii) MOLECULE TYPE: peptide
187      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
189      Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe Ser
190      1          5          10          15
192      Leu Lys Lys Gly
193      20
195 (2) INFORMATION FOR SEQ ID NO: 7:
197      (i) SEQUENCE CHARACTERISTICS:
198          (A) LENGTH: 20 amino acids
199          (B) TYPE: amino acid
200          (C) STRANDEDNESS:
201          (D) TOPOLOGY: linear
203      (ii) MOLECULE TYPE: peptide
205      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
207      Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu Lys Lys
208      1          5          10          15
210      Gly Ala Ala Ala
211      20
213 (2) INFORMATION FOR SEQ ID NO: 8:
215      (i) SEQUENCE CHARACTERISTICS:
216          (A) LENGTH: 20 amino acids
217          (B) TYPE: amino acid
218          (C) STRANDEDNESS:

```

RAW SEQUENCE LISTING DATE: 08/01/2000
 PATENT APPLICATION: US/09/343,406 TIME: 11:11:15

Input Set : A:\343406.txt
 Output Set: N:\CRF3\08012000\I343406.raw

```

219      (D) TOPOLOGY: linear
221      (ii) MOLECULE TYPE: peptide
225      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
227      Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg Leu Ile Ala
228      1             5             10             15
230      Phe Thr Ser Glu
231      20
233 (2) INFORMATION FOR SEQ ID NO: 9:
235      (i) SEQUENCE CHARACTERISTICS:
236          (A) LENGTH: 18 amino acids
237          (B) TYPE: amino acid
238          (C) STRANDEDNESS:
239          (D) TOPOLOGY: linear
241      (ii) MOLECULE TYPE: peptide
245      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
247      Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe
248      1             5             10             15
250      Ser Leu
253 (2) INFORMATION FOR SEQ ID NO: 10:
255      (i) SEQUENCE CHARACTERISTICS:
256          (A) LENGTH: 16 amino acids
257          (B) TYPE: amino acid
258          (C) STRANDEDNESS:
259          (D) TOPOLOGY: linear
261      (ii) MOLECULE TYPE: peptide
265      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
267      Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe
268      1             5             10             15
271 (2) INFORMATION FOR SEQ ID NO: 11:
273      (i) SEQUENCE CHARACTERISTICS:
274          (A) LENGTH: 14 amino acids
275          (B) TYPE: amino acid
276          (C) STRANDEDNESS:
277          (D) TOPOLOGY: linear
279      (ii) MOLECULE TYPE: peptide
282      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
284      Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser
285      1             5             10
287 (2) INFORMATION FOR SEQ ID NO: 12:
289      (i) SEQUENCE CHARACTERISTICS:
290          (A) LENGTH: 12 amino acids
291          (B) TYPE: amino acid
292          (C) STRANDEDNESS:
293          (D) TOPOLOGY: linear
295      (ii) MOLECULE TYPE: peptide
299      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
301      Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu
302      1             5             10
304 (2) INFORMATION FOR SEQ ID NO: 13:

```

RAW SEQUENCE LISTING DATE: 08/01/2000
 PATENT APPLICATION: US/09/343,406 TIME: 11:11:15

Input Set : A:\343406.txt
 Output Set: N:\CRF3\08012000\I343406.raw

```

306      (i) SEQUENCE CHARACTERISTICS:
307          (A) LENGTH: 14 amino acids
308          (B) TYPE: amino acid
309          (C) STRANDEDNESS:
310          (D) TOPOLOGY: linear
312      (ii) MOLECULE TYPE: peptide
316      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
318      Gly Met Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu
319      1             5             10
321 (2) INFORMATION FOR SEQ ID NO: 14:
323      (i) SEQUENCE CHARACTERISTICS:
324          (A) LENGTH: 12 amino acids
325          (B) TYPE: amino acid
326          (C) STRANDEDNESS:
327          (D) TOPOLOGY: linear
329      (ii) MOLECULE TYPE: peptide
333      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
335      Gly Met Ala Ala Leu Pro Arg Leu Ile Ala Phe Thr
336      1             5             10
338 (2) INFORMATION FOR SEQ ID NO: 15:
340      (i) SEQUENCE CHARACTERISTICS:
341          (A) LENGTH: 18 amino acids
342          (B) TYPE: amino acid
343          (C) STRANDEDNESS:
344          (D) TOPOLOGY: linear
346      (ii) MOLECULE TYPE: peptide
349      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
351      Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
352      1             5             10             15
354      Lys Lys
357 (2) INFORMATION FOR SEQ ID NO: 16:
359      (i) SEQUENCE CHARACTERISTICS:
360          (A) LENGTH: 14 amino acids
361          (B) TYPE: amino acid
362          (C) STRANDEDNESS:
363          (D) TOPOLOGY: linear
365      (ii) MOLECULE TYPE: peptide
369      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
371      Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
372      1             5             10
374 (2) INFORMATION FOR SEQ ID NO: 17:
376      (i) SEQUENCE CHARACTERISTICS:
377          (A) LENGTH: 14 amino acids
378          (B) TYPE: amino acid
379          (C) STRANDEDNESS:
380          (D) TOPOLOGY: linear
382      (ii) MOLECULE TYPE: peptide
386      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
388      Leu Pro Arg Leu Ile Ala Phe Thr Ser Glu His Ser His Phe

```

VERIFICATION SUMMARY DATE: 08/01/2000
PATENT APPLICATION: US/09/343,406 TIME: 11:11:16

Input Set : A:\343406.txt
Output Set: N:\CRF3\08012000\I343406.raw

L:34 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:35 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:97 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1